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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,393	04/05/2001	Koji Shimada	10873.692US01	6367

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EXAMINER

PERRY, ANTHONY T

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/827,393	Applicant(s) SHIMADA ET AL.	
	Examiner Anthony T Perry	Art Unit 2879	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 4-6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
 a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6/26/03</u> | 6) <input type="checkbox"/> Other: |

DETAILED ACTION

Response to Amendment

The amendment filed on 10/03/03, has been entered and acknowledged by the Examiner.

Claims 4-6 have been previously canceled in the amendment filed 3/31/03.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, line 2 states "formed so as to elongate a front end portion on an electron beam side of the mask frame." The claim does not establish a positional relationship of the mask frame and therefor the front end portion cannot be determined. The examiner has interpreted the claim to read --formed so as to elongate an end portion of the mask frame in a direction towards the center axis of the cathode ray tube-- in treating the claim based on their merits.

Regarding claim 3, lines 2-3 state "so as to protrude beyond a front end portion on an electron beam side of the mask frame." The claim does not establish a positional relationship of the mask frame and therefor the front end portion cannot be determined. The examiner has interpreted the claim to read --so as to protrude beyond an end portion of the mask frame in a direction towards the center axis of the cathode ray tube-- in treating the claim based on their merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Hirasawa (US 5,160,287).

Regarding claim 1, Hirasawa teaches a color cathode ray tube in Fig. 2 that comprises a shadow mask 5 fixed to a mask frame 8. The CRT also comprises an inner magnetic shield 6 supported by the mask frame 8 and an electron shield 10 provided on the mask frame 8. The recitation “at least a part of the electron shield is formed of a material having a smaller anhysteretic magnetic permeability than the shadow mask, the mask frame, and the inner magnetic shield when an applied magnetic field is 800 A/m (10 Oe)” is considered to be functional language since no structural limitation is stated. Furthermore, the Hirasawa reference teaches that the shadow mask, the mask frame, and the inner magnetic shield are made of soft iron while the electron shield is made of aluminum (col. 4, lines 4-8).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2879

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirasawa (US 5,160,287) as applied to claim 1, above, in view of Kokubu et al. (US 4,931,690).

Regarding claim 2, Fig. 2 of Kirasawa does not clearly show the electron shield elongating an end portion of the mask frame in a direction towards the center axis of the cathode ray tube. However, it is conventional to have an end portion of the mask frame elongated so that part of the frame acts as the electron shield as shown in Fig. 4 of the Kokubu reference. The support frame is disposed as close as possible to the inner wall surface of the panel glass, and the inner end of the support frame is extended as much as possible toward the interior of the panel glass so as to enhance the effect of secondary electron shielding. Kokubu teaches that in such cases a steel sheet is used to form the electron shield instead of aluminum (col. 1, lines 26-43). However, steel, like aluminum, has a smaller anhysteretic magnetic permeability than soft iron.

Accordingly one of ordinary skill in the art at the time the invention was made would have found it obvious to have the electron shield elongating an end portion of the mask frame so as to have an integral mask frame and electron shield, reducing the number of pieces and manufacturing steps needed to produce such a device.

Regarding claim 3, Hirasawa teaches the electron shield 10 is formed from a member different from the mask frame 8. Fig. 2 of Kirasawa does not clearly show the electron shield protruding beyond the end of the mask frame in the direction of the center axis of the cathode ray tube. However it is conventional to have the electron shield extend beyond the mask frame as shown in Fig. 2 of the Kokubu reference. Kokubu also teaches that the electron shield 6 is commonly made of aluminum (col. 1, lines 19-21). Kokubu states that the electron shield

Art Unit: 2879

should be close as possible to the inner wall surface of the panel glass as well as protruding as much as possible toward the interior of the panel glass so as to enhance the effect of secondary electron shielding (col. 1, lines 33-37).

Accordingly one of ordinary skill in the art at the time the invention was made would have found it obvious to have the electron shield be close as possible to the inner wall surface of the panel glass as well as having it protrude the desired amount toward the interior of the panel glass so as to enhance the effect of secondary electron shielding.

Response to Arguments

Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Sakurai et al. (US 4,472,657), Barbin (US 3,766,419), and Jeong et al. (US 5,298,832) show the mask frame and electron shield being formed integrally, where an end portion of the mask frame is elongated so as to act as the electron shield.

Demmy (US 4,002,941) and Iwamoto (JP 2001-229843) teach the electron shield being made of a separate material and protruding past an end portion of the mask frame.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (703) 305-1799. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

Art Unit: 2879

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. The fax phone number for this Group is (703) 308-7382.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Anthony.perry@uspto.gov].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

ATP

Anthony Perry
Patent Examiner
Art Unit 2879
December 8, 2003

Joseph W. Miller
Joseph Miller